

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2004/000939

A. CLASSIFICATION OF SUBJECT MATTER

IPC²: G01N33/48, B01D59/28, C01B4/00;

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC²: G01N33, B01D59, C01B4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Chinese Patent Document (1985--)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNPAT, WPI, EPDOC, PAJ: hydrogen, deuterium, exchange, isotope, virus, microorganism, biological sample

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P-X	Jiangshen Mao, et al., "confirmation of deuterium/hydrogen exchange in virus particles", Science Letter, Jan 2004, vol.49, no.1, page 95-98, see the whole document	1-5
A	Colman M L, et al., "Reduction of water with zinc for hydrogen isotope analysis", Anal. Chem. 1982, 54, page 993-995, see the whole document	1-12
A	Wu R, et al., "Thermostabilization of live virus vaccines by heavy water (D ₂ O)", Vaccine, 1995, 13(12), page 1058-1063, see the whole document	1-12
A	Tanweer A, et al., "Importance of clean metallic zinc for hydrogen isotope analysis", Anal. Chem. 1990, 62, page 2158-2160, see the whole document	1-12
A	Xu Wei, et al., "Measurement of hydrogen-deuterium ratio and particle recycling", Nuclear Fusion and Plasma Physics, June 2001, vol.21, no.2, page 119-123, see the whole document	1-12
A	USA, 5272054 (Switchenko et al.), 21 Dec 1993 (21.12.1993), see the whole document	1-12

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" Inter document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim (S) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
28 Jan 2005Date of mailing of the international search report
03 JAN 2005 (03.01.2005)

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Information on patent family membersInternational application No.
PCT/CN2004/000939

Patent document Cited in search report	Publication date	Patent family members	Publication date
US5272054A	21.Dec 1993	None	

Form PCT/ISA/210 (patent family annex) (July 1998)